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10/766,838	01/30/2004	Norio Yabe	1341.1178	4577

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EXAMINER	
WOODS, ERIC V	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,838	YABE ET AL.	
	Examiner	Art Unit	
	Eric Woods	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Claims 1-7 have been amended.

Claims 8-12 have been added.

Applicant's arguments, see Remarks and claim, specification, and drawing amendments, variously filed 03/06/2006 and 05/18/2006, with respect to various objections and rejection(s) of all claims under various statutes have been fully considered and are found to be partially persuasive.

It is noted that the amendment of 03/06/2006 makes several changes – namely, it moves the entirety of the originally filed Figure 2 into the specification, and moves the entirety of the old description for Figure 5 that was written on the Figure to the specification as well, which compensates for the addition of [0027] and [0031] respectively, and the reordered drawings and figures as well.

The amended specification further changes wording as suggested by the examiner previously, and rewrites many of the phrases that examiner objected to as being difficult or impossible to understand. Since applicant is essentially replacing the object termed "appearance characteristic" as originally filed with "appearance property," that portion of the amended specification is approved.

The amendment to the specification on 05/18/2006 merely adds the statement that it contains color drawings and is therefore a matter of form, and thusly raises no issues.

The title has been changed, so the objection to the title stands withdrawn.

The objection to the abstract stands withdrawn since applicant amended it as necessary.

The objection to the specification that it does not reference the relevant copending application and the requirement that such a reference be added is **NOT** withdrawn, and it is noted that applicant was nonresponsive with respect to this point.

The double patenting rejections are temporarily withdrawn and held in abeyance as requested by applicant, since the claims are not yet in a form that is ready for allowance; applicant is reminded that such rejections are only being held in abeyance.

The rejection of claim 6 under 35 USC 112, first paragraph, stands withdrawn in view of applicant's making the amendment suggested by examiner to overcome that rejection.

The rejections of claims 1-7 under 35 USC 112, second paragraph, stand withdrawn in view of applicant's amendments to the claims to correct the cited deficiencies.

The rejection of claims 1-7 under 35 USC 103(a) under various combinations of Brunner, Sakomato, and other references stand withdrawn in view of applicant's amendments which substantially changed the scope of the claims.

Examiner strongly disagrees with applicant's characterization on pages 2-3 that the rejection of claims 2-4 was unclear. Specific explanation of what characteristics Brunner was lacking and the characteristics provided by Sakomato were supplied, as

well as a motivation. However, since that ground of rejection has been withdrawn, this point is moot.

The objection to the drawings for issues concerning petitions and color drawings does **not** stand withdrawn for the reasons set forth below.

Applicant is still required to provide a list of all relevant copending applications in some manner, including IDS submission.

-For the record, support for the "number of data objects" limitation added to claim 1 can be found in [0032] of the corrected specification, which was originally filed text.

However, upon further consideration, a new ground(s) of rejection is made in view of various references as below, in view of the newly amended claims (as of 03/06/2006) with different scope.

Finally, applicant's arguments with respect to the newly filed claims are moot since examiner is applying different art with clear explanations.

Drawings

Color photographs and color drawings are not accepted unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

> **The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.**

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

The petition submitted on 03/06/2006 under 37 CFR 1.84(a)(2) was denied on 05/05/2006. Whilst applicant has submitted another petition on 05/18/2006, that petition has not yet been decided.

As such, the color drawings submitted on 05/18/2006 are objected to.

The replacement drawings filed on 03/06/2006 and 05/18/2006 are accepted.

Specification

The specification is objected to because of 37 CFR 1.56 and MPEP 2004. Applicant has at least one relevant copending application having common assignees and inventive entities (specifically, application 10/766859) that was filed on the same date, and has not disclosed its existence. Applicant is **required** to amend the first sentence of the specification to include its existence. Examiner **must** be aware of all relevant copending applications in order to properly make double patenting determination, and according to MPEP 2004 applicant is required to make examiner aware of such applications, and clearly an application filed on the same day having the same assignee with common inventive entities (Misawa, Makoto) qualifies as such a relevant copending application.

Applicant is reminded that submission of such application on an IDS under 37 CFR 1.97 and 1.98 would possibly constitute sufficient notification in this regard, and would satisfy examiner's request above for applicant to submit a listing of all known related applications. Applicant still needs to do so.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 6, and 7 would be provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, and 9 of copending Application No. 10/766,859.

This would be a provisional obviousness-type double patenting rejection because both applications are still pending. Specifically, applicant's specification in the instant application lists visibility (e.g. transparency / alpha value) as an appearance characteristic that can be altered. Clearly, the objects shown in Figure 5 of the instant application are overlaid on each other, and transparency is changed to make them more visible with respect to each other (Figures 3 and 4 and the specification generally). Therefore, the visibility determination unit of application 10/766,859 could be the "appearance characteristic obtaining unit" of the instant application, where both appearance characteristic and visibility could constitute alpha values.

The display control unit of claim 1 of the instant application that changes the appearance (e.g. alpha, transparency, see Figures 4 and 5) is comparable to the "appearance changing unit" of the '859 application. Clearly, changing alpha / transparency would render the second object visible.

Finally, claims 1, 6, and 7 of the instant application are apparatus, method, and computer program all performing the same steps, and thusly are comparable to each other and are obvious over claims 1, 8, and 9 of the '859 application, which are similarly method, apparatus, and computer program product.

****Note: Examiner is holding further consideration of the double patenting rejections until allowance of any claims as requested by applicant, since the claims in their final form might be substantially different than those of the '859 application. Applicant is reminded that such rejections are only being held in abeyance, as requested in Remarks page 1.**

Information Disclosure Statement

The information disclosure statement filed 03/06/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language.

The JP 04-042087 was **not** submitted with a translated abstract. Therefore, that reference has **not** been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-12 recite the limitations "the number of colors". It is unclear what the scope of this term is, or what it means. Applicant's specification would **seem** to suggest that such a term could be construed as "the range of the data set" but this at all clear and it is unknown how this term should be construed. For purposes of rejection under 35 USC 102 and 103, the above definition is being used. The metes and bounds of the claim are unclear, the recitation "the number of colors" is relative language, and the term is indefinite for the specification not providing a clear definition.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6-7, and 12 are rejected under 35 U.S.C. 102(e) as being unpatentable over Okude et al (US 6,587,784 B1).

Claims 1, 6, and 7 are apparatus, method, and computer program product all performing the same steps. Since they are all implemented on a general-purpose general computer, the claims are all appropriately subject to the same rejection, since the scope is precisely the same. (Specific differences in claims 6 and 7, which are identical, will be addressed in a separate section below. Primary differences stem from the fact that the weighting unit / step is not expressly recited therein.)

As to claims 1, 6, and 7,

A data display device comprising: (Okude display device 2)

-An appearance property obtaining unit that obtains an appearance property of each of a plurality of object sets that are represented in a same data representation type on a screen, each of the object sets being data objects indicating a type of data, the appearance property indicating a fill area, the number of colors, or the number of data objects; (Okude CPU 1, Figure 1 (e.g. CPU, shown in Figure 2) and maps database 3 connected through link S2. Buildings clearly constitute a 'plurality of object sets,' where it is known that different buildings constitute different categories, such as post office, hotel, and the like. Figure 5, element 512, 'architectural body data managing part,' contains architectural body information 530, which in turn contains attributes 521 concerning buildings, such as **type 540, name 541, number of floors (e.g. height) 542, tenant information 543, detail information 544 (bathrooms), etc** (9:33-45). Next, they are all shown as buildings on a screen (e.g. Figure 10), which are represented in a 'same data representation type' on a screen. The object sets are data objects indicating a type of data (e.g. buildings representing different sets) – where each

different type (e.g. post office) has a different symbol on it – Figure 13, the different kinds of buildings are designated with different symbols (14:25-40, particularly 13:1-3, note the 'T' on the post office in Figures 13A and 13B and the other Yen symbol on the 'Bank' on the other building in Figures 13A/13B, and the like). Finally, the appearance property can clearly represent the **number of floors** and/or similar, as in Figure 11, steps 601a, 602b, 603b, or in Figure 12, steps 601a, 603c, where that determination is made (or Figure 7) – 10:10-30, 11:5-26, 11:55-12:55, 13:1-14:5, and the like. Clearly, the appearance property can be building height and/or **number of floors**, which clearly are "the number of data objects" and/or the like. See – Figure 10, Figures 13A-13B, and the like, clearly different categories of buildings and rankings exist – navigation landmarks, user-selected groupings and the like as well.)

-A weighting unit that applies a weighted value to each object set based on the appearance property; and (Okude CPU 201 in Figure 2 performs the methods embodied in Figures 7, 11, 12, and the like concerning the height checking, where it assigns the weighted value as described in the above cited locations, based on the building height, as described in steps 601a-603c, Figures 7, 10-13b, etc, as explained above, where the comparison is made)

-A display control unit that changes an appearance of at least one of the object sets, so that the at least one of the object sets is displayed in a distinct appearance based on the weighted value. (Okude clearly specifies that such objects that fail the threshold test as above are rendered differently, such as 12:42-50, 11:65-12:2, 10:10-30, and the

like, where the skeleton display of the building is shown, the transparent color, the simple shape, the different type, or the like)

Therefore, Okude teaches all the limitations of the claim except expressly teaching that the buildings consist of a plurality of object sets per se, but it is clear that buildings are stored by type and are sorted by the system of Okude in this manner, as explained above. As explained above, the buildings in Figure 5 have the type attribute and the different variations in how they are displayed are shown in Figures 10 and 13A-13B and the like.

As to claim 12, this is a much broader version of claim 1, where the weighted value is as explained there, and the final appearance is distinct (Okude Figures 10, 13A-13B, etc) based on the number of objects in the data set as explained above, which according to claim 1 can be an appearance property.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as unpatentable over Okude in view of Sakomoto et al (US 2005/0052462 A1).

As to claim 2, Okude does not specifically teach that a fill object, but Okude suggests changing transparency and many other features, as discussed above (12:1-65 and the like), which would at least suggest such. In the interests of expediting prosecution, Sakomoto teaches that it is well known in the art to vary color of objects on a map to emphasize them and to make them more visible [0023]. Changing the color of an object is equivalent to changing its graphical fill, as the term "fill" is well known in the art to mean filling an object with a color. It would be obvious to apply the techniques of Sakomoto to that of Okude, since Okude applies such to mapping software and directions and is clearly an analogous art, and obviously changing the color of an object is simply one form of highlighting or emphasis, and clearly the maps of Okude could have information added to them in the manner of Okude, where such information is obviously of importance to the user (e.g. the location of construction and traffic) and would clearly be advantageous for the user to have ([0196-0198])., and is presented in a manner that is intuitive and easy for the user to understand. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Sakomoto with Okude for at least the above reasons.

As to claim 3, Sakomoto clearly teaches in Figures 14, 16, 23, and the like as a "plot diagram", where such is equivalent to a map. Okude further teaches maps as explained in the rejection to claim 1 above (see applicant's own Figure 5). Motivation and combination is incorporated from the rejection to claim 2.

As to claim 4, Okude does not teach this limitation, but Sakomoto clearly teaches a "line contour object", e.g. the road in Figure 6 and in [0023], where Okude also shows roads but does expressly class them as a different kind of object. Motivation and combination is incorporated from the rejection to claim 2.

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as unpatentable over Okude in view of McQuarrie et al (US 6,658,375 B1) and Pearce (US PGPub 2005/0099321 A1).

As to claims 3 and 5, Okude does not expressly teach these limitations. McQuarrie clearly teaches the output of various simulations as being output as a plot output, and further as a vector map overlaid onto a contour plot and a plot diagram generally (Figures 5-8c, and 24:55-25:11), where these are clearly well known forms in which data could be output. Clearly, when a vector plot is overlaid onto a contour plot, it would be desirable that the contour map not be occluded by the vector map. Next, it is obvious that many types of information, particularly average traffic speeds (e.g. traffic jam information) could be provided in vector format to the user with the direction of traffic being indicated by vector format, where vector data is more intuitive to the user and makes it easier to grasp patterns, where it is known to overlay traffic speed

information on roads on a map in for example a navigation unit in an automobile. See Pearce [0053], to provide better information to the user on unsafe or unusual traffic situations and provide more accurate routing information, where vector format would be easier for the user to understand since the views of roads could be obscured by buildings and the like in the system of Okude. Clearly, the system of Pearce provides such data and coloring and overlay on maps, and McQuarrie illustrates and teaches how such data format in vector format is more useful to users and the like. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Okude to: 1) show traffic information as per the Pearce reference in the manner described in overlay format and 2) to show such information in vector format as per the McQuarrie reference.

Claims 8-10 are rejected under 35 USC 103(a) as unpatentable over Okude in view of Sakomoto as applied to claims 2-4 above, and further in view of Tufte and Dowd (numbers given in body of rejection below).

As to claim 8,

-The appearance property obtaining unit obtains the fill area and the number of colors as appearance properties, and

-The weighting unit applies a weighted value to each of the object sets so that the object set having a larger fill area and fewer colors is placed in a lower layer.

Essentially, this claim recites two elements:

1. That the overall area or size of the data set relative to the total display screen or window area (e.g. as a proportion) ('fill area')(in broader terms, this represents the amount or percentage of the total data set occupied by the particular object set) and the data range ('number of colors') are obtained for each data set or type of data;
2. That the weighting unit applies the weighting value wherein the data set having the larger area and more limited range is placed on a lower level.

Okude and Sakomoto do not expressly teach this limitation.

A PHOSITA would turn to standard textbooks in the art for data organization and information presentation, such as Tufte (Tufte, Edward, "Envisioning Information). Page 53 – "Effective layering of information is often difficult; for every excellent performance, a hundred clunky spectacles arise." Page 60 – "Layering of data, often achieved by felicitous subtraction of weight, enhances representation both of data dimensionality and density on flatland. Usually this involves creating a hierarchy of visual effects, possibly matching an ordering of information content." Page 90 – "What palette of colors should we choose to represent and illuminate information?... A palette of nature's colors helps suppress production of garish and content-empty colorjunk. Local emphasis for data is then given by means of **spot highlights** of strong color woven through the serene background. Edward Imhof develops this theme, with his characteristic mix of cartographic science and art: *Third rule*: Large area background or base-colors should do their work most quietly, allowing the smaller, bright areas to stand out most vividly, if

the former are muted, grayish, or neutral ... Strongly muted colors, mixed with gray, provide the best background for the colored theme." Maps use color schema such as on pages 89-92.

Obviously, it is well known to order the layers of data on a map, and to use coloring to emphasize points in a range that are outliers (e.g. **not part of the background data**), which would constitute the above-recited 'number of colors' – that is, it is known from principles of efficient information presentation to show areas having high deviations from the average values in emphasized format and to make them more visible, thusly suggesting that in a layered graph, such objects should be made more visible. It is noted that in Okude, the more important objects to emphasized in marked in ways that are always visible to the user, although this is not expressly stated –see Figures 10 and 13A-13B.

The technique of ordering layers so that the smallest layer, or the layer having the least fill area or the smallest portion of the overall data set, is well known in the art. It is commonly used, although not necessarily directly remarked upon. Note for example Figure 2 from US PGPub 2004/0227758 A1 to Curry et al, commented upon in [0052] **but this reference is incorporated but merely cited as evidence**.

The technique of emphasizing the important regions from the background is known – Dowd et al (US PGPub 2002/0078131) [0004-0006], where such regions are encoded in a brighter manner or the like [0023-0025], particularly for example a region with a high volume of calls versus the background, etc [0025].

Therefore, in light of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the techniques recited by Tufte and illustrated by Dowd to determine the order of the layers in the maps of Okude in order to facilitate better user understanding of the various layers or categories of buildings that are determined to be different types and change them according to one of the above-stated criteria. Also, it would have been obvious to overlay the various indicators of Sakomoto (motivation for combining Sakomoto and Okude taken from the rejection to claim 2 above) on Okude using the data description techniques in Tufte because they make them easier to understand and comprehend.

As to claims 9 and 10, they are rejected in the same manner.

Claim 11 is rejected under 35 USC 103(a) as unpatentable over Okude in view of McQuarrie and Pearce as above, and further in view of Tufte and Dowd.

Okude, McQuarrie, and Pearce do not expressly teach this limitation, but they do teach map elements as being organized in layers as above.

A PHOSITA would turn to standard textbooks in the art for data organization and information presentation, such as Tufte (Tufte, Edward, "Envisioning Information). Page 53 – "Effective layering of information is often difficult; for every excellent performance, a hundred clunky spectacles arise." Page 60 – "Layering of data, often achieved by felicitous subtraction of weight, enhances representation both of data dimensionality and density on flatland. Usually this involves creating a hierarchy of visual effects, possibly matching an ordering of information content." Page 90 – "What palette of colors

should we choose to represent and illuminate information?... A palette of nature's colors helps suppress production of garish and content-empty colorjunk. Local emphasis for data is then given by means of **spot highlights** of strong color woven through the serene background. Edward Imhof develops this theme, with his characteristic mix of cartographic science and art: *Third rule*: Large area background or base-colors should do their work most quietly, allowing the smaller, bright areas to stand out most vividly, if the former are muted, grayish, or neutral ... Strongly muted colors, mixed with gray, provide the best background for the colored theme." Maps use color schema such as on pages 89-92.

Obviously, it is well known to order the layers of data on a map, and to use coloring to emphasize points in a range that are outliers (e.g. **not part of the background data**), which would constitute the above-recited 'number of colors' – that is, it is known from principles of efficient information presentation to show areas having high deviations from the average values in emphasized format and to make them more visible, thusly suggesting that in a layered graph, such objects should be made more visible. It is noted that in Okude, the more important objects to emphasized in marked in ways that are always visible to the user, although this is not expressly stated –see Figures 10 and 13A-13B.

The technique of ordering layers so that the smallest layer, or the layer having the least fill area or the smallest portion of the overall data set, is well known in the art. It is commonly used, although not necessarily directly remarked upon. Note for

example Figure 2 from US PGPub 2004/0227758 A1 to Curry et al, commented upon in [0052] **but this reference is incorporated but merely cited as evidence**.

The technique of emphasizing the important regions from the background is known – Dowd et al (US PGPub 2002/0078131) [0004-0006], where such regions are encoded in a brighter manner or the like [0023-0025], particularly for example a region with a high volume of calls versus the background, etc [0025].

Therefore, in light of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the techniques recited by Tufte and illustrated by Dowd to determine the order of the layers in the maps of Okude in order to facilitate better user understanding of the various layers or categories of buildings that are determined to be different types and change them according to one of the above-stated criteria. Also, it would have been obvious to overlay the various indicators of Sakomoto (motivation for combining Pearce and McQuarrie and Okude taken from the rejection to claim 5 above) on Okude using the data description techniques in Tufte because they make them easier to understand and comprehend.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Woods

September 13, 2006

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER